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GOLDWIN SMITH WALK

The Cornell Countryman

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No. 7

COÖPERATIVE SELLING

By Arthur R. Rule

Vice-President and General Manager, North American Fruit Exchange, New York

THERE are three well defined divisions in the fruit business: 1st, horticultural, or hanging the fruit on the trees; 2d, handling, requiring the most improved methods in picking, grading, packing and loading; 3d, selling. Each division is inter-related to the other, but each, nevertheless, requires a specialist.

There have been Utopian dreams of centralizing the sales work of all fruits and produce through one channel, the marking off of territorial lines and the allotment of supplies accordingly. This as an ideal is good; its practical operation is decidedly problematic. A number of growers' organizations in different sections of the country can harmoniously utilize the same sales medium. Others for various reasons must operate differently. There must necessarily be groups according to commodities and sales requirements.

Combination or coöperation? An almost universal idea among producers has been, let us form a trust, let us imitate the sagacity of Standard Oil, the Steel trust, et al; but the public is taking a hand. Twenty-eight officers of the National Cash Register Co. were given jail sentences the other day. President Wilson has clearly defined the illegal combination:

"A trust is a combination or agreement between corporations, firms or persons, any two or more of them, for the following purposes, and such trust is hereby declared to be illegal and

indictable. To limit or reduce the production or increase the price of merchandise or of any commodity. To make any agreement by which they directly or indirectly preclude a free and unrestricted competition among themselves or any purchasers or consumers, in the sale or transportation of any article or commodity, either by pooling, withholding from the market or selling at a fixed price, or in any other manner by which the price may be affected."

The high cost of living is a personal question. It affects the hundred million. The price of an apple to the consumer is as important as the cost of its production to the grower. The searching questions fired at General Manager Powell of the California Fruit Growers' Exchange at the recent Ways and Means Committee meeting at Washington are indicative of the attitude of the general public towards coöperation of a sectional character.

The distance from the tree limb to the consumers' hand is being shortened. To the credit of fruit growers it must be said that they awoke to this necessity years ago and have developed remarkably in sectional coöperation work. Consumers are now aroused. The demand for organized selling in its broad sense is becoming insistent from both the consumer and producer. The result is as sure as the law of evolution.

While the coöperative spirit has been admirably developed locally, yet we

are today confronted with the peculiar situation of one producing section of the country at competitive war with another. The clash and grappling for markets and trade territory works useless waste both to producers and consumers. Citrus Growers of Florida and California should recognize the fact that sooner or later they must broaden their coöperation, reach hands across the continent, and as fellow growers, use discretion and avoid useless waste in marketing the crops of the two states. Likewise, apple growers of the East, of the West and Northwest must come to understand that in a broad sense they can coöperate in the scientific sale of their fruit.

The spirit of decrying the products of another section is short-sighted. The man who spends energy or money calling attention to supposed deficiencies of products of his competitor unconsciously advertises and aids him. The Western orange grower who calls attention to the danger of eating oranges containing seeds, or the Eastern orange grower who gives the consumer a recipe including among other ingredients, "Take the juice of six Florida oranges or twelve California oranges;" the Western apple grower who decries the barrelled pack as typical of misrepresentation, or the Eastern apple grower who refers to the "woody, tasteless fruit of the West,"—are all wasting their energy. Every pound of this energy should be devoted to selection of those varieties nature decrees to be premier of each locality, the production of better fruit and the proper advertising of it.

Advertising is the Siamese-twin-brother of good salesmanship. They are inseparable. A wonderful opportunity exists for all apple producers to join hands in one grand movement to double and treble the consumption of this fruit. A barrel or a box in the consumer's home means a tremendously increased consumption. Packages may need to be made smaller to meet the requirements of city dealers having small storage facilities. Excessive profits must be cut out and more direct channels to the consumer established through consumers'

leagues, buyers' clubs and otherwise.

No well informed person questions the correctness of coöperation as a principle. Its application must be adjusted to suit local conditions. The next step is joining hands of different producing sections of the country in the use of a central sales organization.

We see individual growers join interests for mutual benefit, in the Association; Associations merge into the District Exchange by the same impulse. It is logical that many of these exchanges situated in different sections of the country join hands in the establishment and maintenance of a central sales organization, designed to meet their joint requirements. A potato shipping organization in New Jersey ships actively only a few months in the year, and of itself cannot maintain a thoroughly organized, widely established, year around system of branch sales offices in the various cities throughout the country. Orange growers in Arizona are confronted with the same problem. Other organizations are similarly situated. Their combined tonnage, the inter-locking shipping seasons, produce a big tonnage, a year round supply.

The solution is simple. An organization with sales offices in every important market supplies the full requirements of each local association or exchange. Bonded men throughout—the maintenance of a high standard of efficiency, uniform sales, credit and collection methods—every detail meeting every requirement of modern business efficiency. This central sales organization cannot be a combination in restraint of trade. It must be a thoroughly organized, firmly established, well-oiled, simply operated sales machine. Its functions must be the furnishing of efficient, supervised salesmanship. Each producers exchange, maintains control of its own business, working direct with each sales office.

A day's demand unsupplied is forever lost. Accurate knowledge of the demand at all consuming centers every day permits most intelligent regulation of supply. This cannot be done without sales organization.

COÖPERATION IN THE HANDLING OF LEMONS IN CALIFORNIA

By G. W. Hosford

THE writer has been for three years manager of the largest coöperative association handling lemons in California. The San Dimas Lemon Association is one of the local organizations, affiliated with the California Fruit Growers' Exchange. As a member of the larger organization, it shares in all the benefits accruing from the coöperative selling agencies established throughout the country by the parent organization. The Exchange is selling over 60 per cent of the oranges and lemons produced in California. As a selling agency, it can hold its own with any organization of its kind in the country. Affiliated with the Exchange, is the Fruit Growers' Supply Company, which manufactures shook and buys supplies for all members of the Exchange. The advantages to the individual grower, derived from the selling agency; also from the company through which they can buy their supplies, are so great that they can hardly be estimated. Without going further into the advantages of the larger organization, the writer desires to bring out some specific advantages accruing by the growers through the organization of the local association.

Our association shipped during the year, Sept. 1st, 1911, to Sept. 1st, 1912, 252,000 packed boxes of lemons. The expense of handling this output, and the returns for the growers, were as follows:

Railroad Charges:	
Freight	\$220,000.00
Icing	12,220.50
	<hr/>
	\$232,220.50
Expense:	
Selling	\$21,798.71
Packing House Labor	60,237.25
Picking Labor	58,421.85
Box Shook	42,156.07
Wrapping Paper	11,897.07
Salaries	9,901.25
Miscellaneous	14,169.91
	<hr/>
	\$218,582.11

Growers:

Investment in Fruit Gro's.	
Supply Co. Stock	\$5,068.96
Payment on Packing House.	12,211.90
Cash Receipts	434,392.60
	<hr/>
	\$451,653.46
Total	<hr/>
	\$902,456.07

It is interesting to note that, of the amount of money received in gross for this output of fruit, the freight and icing charges going to the railroads, amounted to about one-fourth; the expense of handling the business about one-fourth, and the returns to the growers one-half. Notice the small proportion of the expense which is chargeable to selling cost. Notice, also, the items aggregating nearly \$118,000.00, or over half of the expense of handling the output, which were paid to ordinary labor. The amounts charged to investments in the Fruit Growers' Supply Company for stock, and payment on packing house, are in the nature of a permanent investment for these growers.

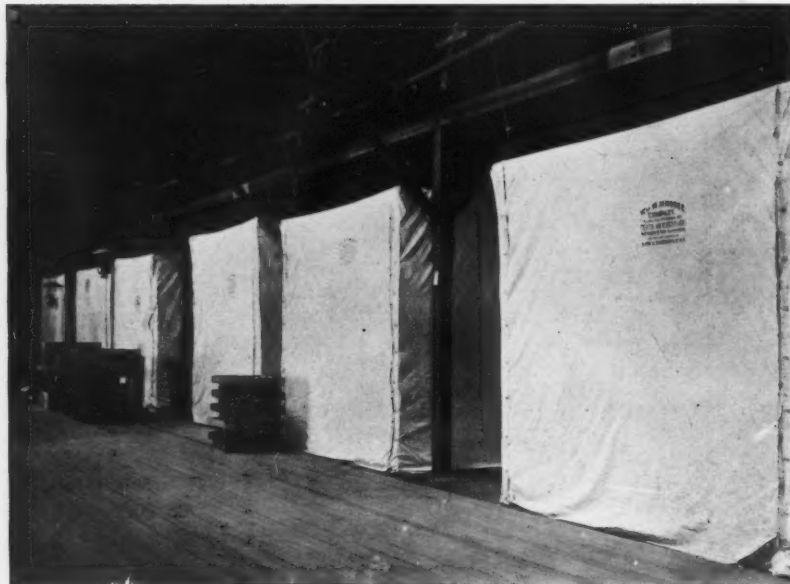
The advantages of having a well-equipped packing house located in the district, are so great as to materially affect the valuation of groves, in addition to the increased returns from year to year from these same groves.

The 300 growers participating in the coöperative features of the San Dimas Lemon Association, are able to carry on a business of this size because they have pooled their interests. There are no growers in this association holding over 20 acres of bearing lemon grove. No one of them could afford to put up buildings, properly equipped, for the handling of lemons. The buildings which have been erected for the handling of the business, represent an investment of from \$80,000 to \$100,000. These buildings are not only work rooms for the washing, grading and packing of the fruit, but also comprise storage rooms and curing rooms for the handling of a considerable

portion of the years' output. This association sometimes has in storage over 200 cars of lemons. It is necessary for the profitable handling of the business, that storage of this nature should be provided. Our heaviest pickings of lemons come during the months of February, March, April and May. If the lemons were all shipped

storage facilities, would probably pay for these buildings in one year. The credit of a large association of this kind is large enough to carry this indebtedness over a period of years, and the buildings are actually paid for from the returns from the fruit during a period of several years.

The Association can, also, erect



CURING LEMONS

and sold during this period, as fast as they became ready to pick, the prices received for them would be very low, and the distribution would fall into the hands of speculators at the market end. The lemon growers of California have demonstrated that they can store this fruit in California without artificial cooling, and hold it much more satisfactorily than could be done in cold storage plants. The successful handling of lemons in storage depends so much upon the quality of the different grades of fruit handled that the man at this end can manage the storage much better than the man on the market. The increased returns on the year's output of lemons, due to proper buildings for the accommodation of

pickers, and in that way be able to command the services of a sufficient number of pickers to handle the business during the last few years. The larger corporations began providing camps first, and it soon developed that the organizations having their own camps, were more successful in holding the necessary labor during the rush season than those who left their pickers to shift for themselves.

The Association can afford to invest money in box machines, washing machines and apparatus of this kind, and can do it much more cheaply than the individual grower. A box machine costs about \$1,300.00. Where it can be used for the making of 200,000 or 300,000 boxes, the saving in labor, over

the cost of making the boxes by hand, will pay for the machine in less than two years. The life of a box machine is from five to ten years.

The large association can also develop an organization of trained men which can handle the business much more intelligently than the individual grower. The citrus business, and

are followed by the months of heaviest shipping, and an organization handling both the field and the packing house ends of the business, can shift their salaried men from the field to the packing house when the conditions of labor make this advisable. While it would appear to an eastern grower, that the salary paid to some of the



A LEMON GROVE

particularly the lemon business, has an advantage over most fruit industries, inasmuch as its harvesting operations are extended through the greater portion of the year. It is true that our pickings of lemons are a great deal lighter in some months than in others, but there are no months, or even weeks in the year, during which the San Dimas Lemon Association does not pick and ship lemons. This feature of the business warrants the payment of salaries for 12 months of each year, and makes possible the organization, during the months of lighter picking, of a force of men which acquire sufficient knowledge and experience to handle the business most efficiently during the months of heavier work. Furthermore, the months of heaviest picking

packing house managers and foremen, were extravagantly large, the expense account shown above, proves that this form of organization is warranted by the size of the business and the comparatively small proportion of the returns paid out in salaries. The losses from mis-management could easily be so large, in the handling of a business of this size, as to pay several times over the salary of a really efficient manager.

The training required in the handling of a lemon business, represents, not only the handling of labor in large quantities, but also the special knowledge of the careful handling of the fruit; the experience in knowing how long the fruit may be held with impunity, and the expert handling of the ventilation in the curing of the fruit.



PACKING LEMONS

In the orange business, the fruit is generally shipped as it is picked. In the lemon business, large quantities of fruit are picked which must be stored and cured for two or three months, and sometimes even longer. This feature of the business is so important, that trained men have been able to make themselves valuable to the industry. No individual grower could himself develop this efficiency, or afford by himself, to pay the wages warranted where a man's time is spent in looking after a large block of fruit.

The cooperation of a large number of growers, also makes possible the development of a regular trade throughout the country for certain grades of fruit. The groves situated over a comparatively large territory, do not all have their heaviest crops at the same season. We have one district which has comparatively heavy pickings during the fall of the year. The average of a large number of groves, makes the receipts of fruit more uniform throughout the year, than that from any one grove. Consequently,

we are able to develop a regular trade for our different brands and keep it supplied throughout the year. The large organization is also able to load for the different markets in the country, whole acres of the particular grades or sizes which individual markets prefer. For instance, the Pacific Northwest will pay top prices for first-grade fruit of the most desirable sizes. The large association can load straight cars of this fruit. At the same time, they can load whole cars of second-grade smaller sized fruit for the Southern market, which will pay more for this particular kind of fruit as a general rule, than any other market. This feature of the business warrants the larger associations and gives them an advantage over much smaller associations. In general, the overhead expenses, including salaries, interest, insurance and selling costs, are much less per box in a large association like ours, than in the smaller organizations.

All of these features have proved, in a business-way, that the lemon business may be handled more successfully

by a coöperative organization of small growers, than by any one of the growers or even a few of them, working in small units.



WASHING AND GRADING LEMONS

WHAT IS COÖPERATION?

By Lloyd Tenny

COÖPERATION is a much discussed subject (during very recent years) wherever farm people are gathering together. This is but one of many things, which point in an encouraging way to the future success of our rural development. It is doubtful if there has been a single factor which has influenced rural life more in the past decades than the strong individualism of the American farmer. In the main, this has been a splendid trait. The farmer feels that he is master of his own situation, his own boss; he looks to no one as his superior. He accepts another's view or advice only after he has accepted it as his own. Conditions in the past have been such, that the farmer could, in the most instances, succeed well in his work without much concern as to what his neighbors were doing. New factors are coming rapidly to the front, however, and we are entering quite a different age agriculturally. The problems that now confront the man on the farm cannot be solved by individuals alone. The farmer makes but little of his own

equipment. He must buy it from others, and often the manufacturers are far away and know the ways of the city and of trusts and combines. It makes a transaction in which the individualistic farmer has the losing side. It has also come about that with the great development of railroads and refrigeration, the farmer markets but little of his produce direct. The foodstuffs he grows, may be consumed three thousand miles away. All this helps to make complex farming and the individual is unable to cope with the situation. These are but two illustrations which help us to understand better the situation as it exists today, and they illustrate only in a small way the great need there is for the farmers of the country to realize that there are problems, so large and complex, that they will never be solved until the farmers stand together. This is coöperation. It may be coöperative buying; it may be coöperative selling. On the other hand it may be coöperation along one of many lines which affect rural life.

THE SMALLER COÖPERATIVE ENTERPRISES

By Paul Work

Department of Horticulture, Cornell University

PERHAPS no single phase of rural development has received more persistent attention during the past twenty-five years than coöperation. A perusal of the literature which has become so extensive convinces one that attention has been focused upon the larger enterprises whose successes have been most conspicuous. The citrus and deciduous fruit selling organizations of the Far West, and such eastern concerns as the Monmouth and Burlington County, Farmers' Exchanges of New Jersey, the Eastern Shore Growers' and Shippers' Association of Maryland, and the South Shore Growers' and Shippers' Association of our own state are good examples. Each of these is fighting a good fight in the producers' battle for a fairer share of the consumer's dollar. They are pioneers pointing out the way which the producers of all agricultural commodities will be following within the next few decades. They are trying out methods and building up a body of experience and information that is of inestimable value for the future.

There are, nevertheless, many possible circumstances which in different localities prevent the immediate establishment of such great enterprises as we have just mentioned. In some places, the attempt had been made and failure has resulted. The difficulties are many. First and most important of all is the lack of the true coöperative spirit. Coöperation, by derivation, means nothing more nor less than working together. Another obstacle is selfishness of a narrow sort. Far-seeing selfishness favors coöperation. Lack of confidence in leaders has brought about many a failure. While often unwarranted, this lack of confidence has in some cases been justified. Perhaps as serious a drawback as any is half-hearted interest. Many are willing to be helped but unwilling to lend a hand. Some downfalls have been

brought about by honest difference of opinion as to policies and methods. In many instances, growers outside the organization are benefited almost as much as the loyal supporters. One of our western New York associations has suffered very severely from the competition of the old line dealers, who are willing to offer exceedingly favorable terms as long as they must compete. Producers even seem to prefer to patronize these dealers, little realizing that the old conditions will again prevail as soon as the coöperative enterprise has fallen through, lack of their support.

In looking over the experience of pretentious coöperative enterprises, some of which have been successful and some of which have failed, we are led to wonder whether we are not in too many cases either beginning at the top or doing nothing. Are there not many simple undertakings that would be full of usefulness to growers, and which would at the same time prepare the community for successful coöperation in larger things? Should not such an enterprise grow as a tree rather than as a sky-scraper?

A wide correspondence during the past few months among organizations of which we seldom hear has lent support to the view that there are many advantages to be gained through association aside from the advantages of buying and selling on a large scale. Perhaps we can best consider the subject in the light of illustrations gleaned from this correspondence.

The first thing to be gained is mutual acquaintanceship. In most market garden sections, and in many shipping sections, the feeling of competition is keen. A feels that perhaps B would just as soon undermine his business as not; but when A becomes acquainted with B, each finds that the other is not such a bad fellow after all. One of the best agencies for bringing men

together is a local meeting gathered for the purpose of hearing a successful grower from another locality or a speaker from the agricultural college. In such meetings the round table idea is becoming more and more prevalent. After the address, men gather in little circles and find they are becoming acquainted. Soon they are talking over neighborhood problems. Such has been the experience of a little market gardeners' society at Gardenville, New York. The leader of the group says, "There always seems to be someone present who knows the thing that the others do not know." Unwillingness to part with choice bits of information soon disappears.

When such groups are together, neighborhood problems soon arise. One of the first is the purchase of supplies. The Gardenville people are now buying fertilizer by the carload. Not every one in the organization could agree on a given brand. Perhaps six think alike on this point and can use a car. These six go ahead and make the purchase, and before long the whole membership is ready to join in similar enterprises.

The other local problems are innumerable. The Boston Market Gardeners' Association has been able to standardize the market boxes, and to secure either the return of the package or the price of it. The Cleveland growers find that they can get better prices from the manufacturers of packages since they have established definite standards.

At Rochester the city market was managed in such a way that it was becoming impossible for growers to do business under favorable conditions. They have joined hands, and they now control the situation. The Troy Market Gardeners' Association exists for the sole purpose of superintending the drawing of stalls on market each year, and they have secured an equitable allotment which was formerly impossible. The Cleveland gardeners found that they could not secure satisfactory facilities. They rented a building of their own, and placed in it a man in

whom they had confidence who sold each man's produce on a commission of ten per cent. They seemed unable to agree upon a plan of pooling, so they adopted a plan upon which they could agree.

Direct control of market prices is seldom possible. The members of a little organization at Newburgh have simply agreed to keep in touch with each other by telephone. They talk over conditions, learning how much each man has to dispose of, but they are not bound to a given figure in case they find it necessary to make a cut to dispose of the last of a load.

A united body of growers can exert a powerful influence upon local legislation which affects their interests. The Boston growers experienced great difficulty in complying with unreasonable regulations of local boards of health in the suburban villages through which they had to pass since they have been working together. The Secretary of the State Board of Health has been heard to remark, "You touch one and you touch them all." In another section where taxes were becoming exorbitant, a reduction of eight to ten dollars an acre was secured.

The Massachusetts Asparagus Association was organized for the purpose of finding out how to avoid trouble with asparagus rust. They have secured the establishment of an experiment station especially for the study of this crop. While final results have not yet been attained, they feel that their society is worth while if for nothing more than their annual field meeting, although they have made much progress in the control of the disease.

Some years ago South Lima,⁶ New York, growers found it quite impossible to secure satisfactory railroad service at their station. They formed an organization and took their troubles to the Public Service Commission. The Erie Railroad spent five thousand dollars in giving them the facilities they needed. The growers in the neighborhood think that the Association has been pretty nearly a failure, but this is

only one of the things it has accomplished and this alone would be sufficient to justify its existence. An exactly similar story could be told of Ionia, New York.

Well-nigh countless other examples of success in small undertakings might be cited. A study of the experiences of these many organizations makes it clear that with a producing community as with an individual, "practice makes perfect." Success in such activities as have been mentioned leads to the adoption of simple helps in selling produce. The Long Island Potato Exchange does not attempt a pooling system, but controls the buyers by itself buying at such figures as the distant markets will

justify. If this control were not exercised, prices would be set at such figures as the dealers care to pay. Doubtless some day each grower will be willing to support a real coöperative selling plan.

By trying to agree on methods of attacking large problems when there has been no experience in handling small problems, discord is often engendered and real progress is hindered. By agreeing in the solution of a single simple problem, while agreeing to disagree on others, real progress is made. As time goes on, those who once agreed to disagree are now agreed to agree, and the usefulness of the organization expands.

OBSERVATIONS ON THE DISTRIBUTION OF DAILY EGG PRODUCTION

By James E. Rice

Professor of Poultry Husbandry, Cornell University

(Continued from February and March Numbers)

To Breed a Long Lived Race of Fowls

To accomplish this purpose, the following essentials may be enumerated: 1st, to breed only from stock that have qualified in five essentials: 1st, they must have lived for two or three years or more and must have marked evidence of possessing superior

constitutional vigor which must be given first consideration. Thus by applying the law of the "survival of the fittest," as regards robust health, the winnowing process of time, will have eliminated the unfit, namely, those that cannot withstand the strain of high production and heavy eating; 2d, They must have produced a

Grade	Count	Value for Market	Value for Hatching
1st	41	04	1231
2nd	38	54	1140
3rd	42	490	1260
4th	35	63	1050
5th	32	397	960
6th	31	10	930
7th	28	19	780
8th	19	103	570
TOTAL			1114

CORNELL EGG GRADING BOARD FOR ESTIMATING THE VALUE OF EGGS FOR MARKET AND FOR HATCHING.

well balanced egg yield each year for two or three years or more, rather than a phenomenal yield in any one year or parts of a year; 3d, they must lay eggs of standard size and shape. 4th, They must have demonstrated their ability to lay eggs of strong fertility and hatching power; 5th, Good breeding must be accompanied by the most approved methods of rearing, feeding, management, etc., in order to maintain the size of the fowl in proportion to the size of the eggs and the number laid. This is a problem demanding the highest science and art of breeding and management. Let us hope it is not impossible of attainment. Its importance warrants the effort. Anxious poultrymen everywhere await the result.

When to Select the Breeders.—Heaviest Laying Fowls Molt Latest

This fact has great significance to the poultry breeders. It gives a very reliable method of selecting out the best layers with considerable accuracy without resorting to expensive yearly trap nesting. Lady Cornell is shown in the February issue in the "tail piece" in full molt Dec. 6th, 1911. In the March issue are shown Lady Cornell, Madam Cornell, and Cornell Supreme the latter part of November, 1912, while still laying and only commencing to molt. The late molting of these high producing hens is the rule, not the exception.

Reference to the chart of daily production, color plate March issue, will show the periods of low production in November and December, for even the best layers, and much lower production or absence of production on the part of the poor layers, only the best hens and pullets lay under the adverse fall conditions. The fall and early winter season then is the best time of the year to mark and select out for breeders the hens that are laying.

Sixteen Points in Breeding and Management in Developing a Strain of Fowls for Egg Production

The important steps to be observed in producing a strain of heavy layers may be summarized as follows:

- 1st, select good eggs for hatching.
- 2d, select strong germs during incubation.
- 3d, select vigorous chicks for brooding.
- 4th, select strong young stock to renew the flock.
- 5th, select April and May hatched pullets of similar ages that begin to lay in October, November and December.
- 6th, select hens that lay in October and November.
- 7th, select the late molting fowls, November and December.
- 8th, select vigorous hens having pale shanks in September, October and November in case of yellow shank varieties.
- 9th, select hens that are heavy eaters and busy.
- 10th, mate males from high producers to high producing hens.
- 11th, breed from hens, rather than from pullets except in rare instances and with especially well qualified fowls.
- 12th, use eggs weighing not less than two ounces, each perfect in shape, color and texture for hatching.
- 13th, pedigree hatch and legband the chickens from known matings of high producers in order to discover especially prepotent individuals.
- 14th, hatch and grow young stock large and thrifty by rearing on free range with abundance of the right kind of food.
- 15th, feed the breeding flock with special regard to production of eggs having strong hatching power.
- 16th, shelter the breeding stock in sanitary fresh air poultry houses and provide free range the year round.

*Several minor errors in the original data slightly change the ratings of a few individuals but do not affect the general result.

THE PROBLEM OF RURAL CREDIT

By John Bauer

Assistant Professor of Economics, Cornell University

CREDIT is a tremendously abused and confused term. It is too frequently used with hazy conceptions and mystical notions. We are told that it lubricates the wheels of industry, that it is a mysterious something whose being itself means prosperity and whose non-being is calamity extreme. But usually we are left somewhat uncertain just what the thing is and how it produces its magic results.

There is nothing mysterious about credit and its share in industry. It is important, but it fills no such magic role as is often flared before our imagination. A great deal of needless confusion has gathered about the subject, especially as it applies to the business of agriculture.

You get *credit* when you *borrow*. You obtain credit when I lend you money or ready purchasing power in any form and you promise to return to me sometime in the future an equal sum of money or purchasing power (usually with interest). You take *present funds* and I take your promise for *future funds*. That is all there is to the mystical notion before us.

Of course, credit is important. If you can get ready funds now, you can make immediate extensions or improvements in your business, which according to present prospects will enable you to pay your obligations to me in the future and to make a profit besides. The general gain from credit transactions come from the fact that all the time in society some have ready funds and have no present need for them, while other persons borrow them to immediate advantage in their business. Obviously there are no mystic wand or hokus-pokus operations.

For the purpose of our present discussion we may classify credit into (1) long time and (2) short time loans. There is no absolute division in time between the two, still we may say

roughly that long time loans extend over a period of one year or more, usually from two to ten years, while those for a short time cover a period of less than a year, usually from thirty to ninety days.

The funds obtained through long time loans are usually turned into plant and equipment, while those received through short time ones are used to tide the business over the production period. The security required for the former is usually a mortgage on plant and equipment, and for the latter merely the immediate prospects of the business or other personal security—it is supposed to be paid from the proceeds of sales in the near future and it serves to tide over to that time.

The rate of interest required varies from one class of loan to another and from time to time. Fundamentally it is a kind of *price*—paid for the privilege of obtaining immediate purchasing power, and the price depends upon a large number of circumstances. However, other things being equal, the determining circumstance is the security or risk involved. Interest is low if there is little uncertainty of the loan being repaid according to agreement, while it is high if there is considerable uncertainty. The higher rate serves to compensate the lender for the greater risk involved. This proposition is fundamental for the present discussion.

Now, let us consider first the matter of long time loans to agriculture. It is generally claimed that the country over farmers are compelled to pay unreasonably high rates of interest compared with those paid by other lines of business. Roughly, farmers are said to pay eight per cent while other business classes pay only five per cent. Frequently also the charge is made that the bankers consciously take advantage of the farmers and discriminate against them.

While there is no statistical proof, it is extremely doubtful whether there is any such conscious discrimination or whether the farmer pays higher rates than other business men with no better security to offer. A banker looks principally for profits; he is no respecter of classes or social positions; the farmer's interest (with proper security) looks exactly as good to him as a groceryman's, a manufacturer's, or a society swell's. The important consideration is security. Otherwise, he is not finicky about interest bed-fellows.

We must remember that agriculture the country over is conducted on a small scale of production. The ordinary farmer has but a small capital. When we say that other business pays only five per cent, we have in mind the large industrial corporations, whose business standing is high and whose reputation is known in financial circles the country over. They have large capitals upon which to base their loans; they reach a large and open market because they are known; they get the most favorable loan accommodations possible. The farmers have small capitals to offer for security and their financial reputation does not extend beyond the nearby community. There is the difference!

Under like conditions of security and financial reputation the farmers probably fare no worse than do other business classes. Take an Ithaca groceryman and a Tompkins County farmer; each has private capital worth \$5,000, each sees clearly how he could make good profits if he had \$5,000 more to put into the business, and each goes to the banker for assistance. Now, either one will probably have to pay a high rate of interest, if he can get the loan at all. The point is, the banker will have to be repaid finally out of the business, and he probably does not see prospects as gaudily as do the applicant borrowers.

Take a grocery clerk and a farm hand; each personally well-gifted, each (in his own mind) with fine independent business prospects if he had capital! Again, let them try to

borrow, and the farm hand will probably fare no worse than the clerk; in either case the banker demands more security than just the self-confidence of the persons before him. As a matter of fact, the ordinary small business man or manufacturer cannot borrow at five per cent., if he wants considerable funds for the extension of plant. If any one without large capital security, whether farmer or otherwise, succeeds in borrowing considerable sums at a low rate, it is because he has found a personal backer who has become convinced of his exceptional personal and business qualities.

Now, let us turn to short time loans. The claim is made, and for the most part perhaps correctly so, that the farmer practically cannot borrow at all to tide over the production period. The retailer borrows till he can dispose of his stock of goods (or part of it), or can make collections from his customers; the same is true of the wholesaler or manufacturer; all can obtain immediate funds based upon the prospects of sales and collections in the near future. But the farmer stands otherwise. Practically nowhere in the country can he borrow on the security of growing crops from whose sale the loan might be paid in the future. Our banking machinery does not offer him the facility of tiding over the production period. He is compelled to provide otherwise, often at considerable sacrifice, inconvenience and annoyance; or pay ruinous interest. Here is really the crux of the rural credit problem.

Of course, the facts just stated can easily be exaggerated. While the farmer cannot get the desirable short time banking accommodations, and he often suffers as a consequence, nevertheless he does get credit in other ways which in some measure relieve the necessity of bank credit. For example, he runs an account with the grocer, the clothier and hardware dealer till he sells his crops in the fall; in case of crop shortage he is carried on their books sometimes for two or three years

at a time just on personal security. In the same way there are other forms of credit which have been developed for the farmer's convenience. Nevertheless, he suffers from the lack of the ready accommodations that are provided for other kinds of business.

Again, there is probably no conscious discrimination against the farmer, but the fact remains that he cannot get loans that may be sorely needed, except perhaps at a ruinous rate of interest. The reasons for this condition are not far to seek. Three may be readily suggested. (1) Uncertainty of crops. With short time loans the security is personal, based principally upon immediate business prospects. A groceryman is practically certain in sixty days, or in the agreed-upon period, to sell enough goods or to make collections to meet his obligations. With the farmer, his ability to repay depends upon his crops, which for any one year are subject to a score of uncertainties. Here is the chief defect in the farmer's security.

(2) Long tiding-over period. Commercial banking has been developed through ordinary business and not farmers' demands. The usual business loan is for thirty, sixty, or at most ninety days. In farming the period is much longer, covering usually perhaps six months or over. Consequently the banker hesitates to lend the farmer, because the funds would be tied up for too long when they probably would be needed for shorter time accommodations.

(3) Immediate withdrawal of borrowed funds. The ordinary business man leaves the proceeds of the loan with the bank and draws checks against the deposit as needs require. But, the farmer is more likely to draw out in cash immediately all of the funds, and then he makes his payments in cash. This fact obviously makes his loan less profitable to the bank than if he maintained a deposit and drew checks against it. The cash is more convenient to him, but the check payment plan is more profitable to the banker.

Now, is there any way by which the farmer can get better loan accommodations? In line with the reasoning in this paper, the problem above any other is to provide better and safer security. How the individual farmer is to do that is rather hard to see. And how banking accommodations are to be provided without first class security, unless ruinous interest be charged, is also hard to see, certainly ordinary private capital will not attempt such an undertaking.

The answer, if there be one, is in more or less special agricultural banks, with their foundations in farmers' coöperation, perhaps handling credit through note issue rather than the deposit system, and planning their business with the idea of longer credit extensions than is customary in ordinary commercial banking. The important point is coöperation, and the object of coöperation is to provide greater security. Any plan of coöperation must involve some sort of mutual credit insurance. How such a plan might be worked will be outlined briefly in the remaining paragraphs.

Suppose the farmers in a township or in some particular district formed an association (virtually partnership associations), with the object of insuring each other's credit. This association, having back of it the combined capital of its members, organized under and controlled by the laws of the state, would be able to reach the general loan markets of the country and would probably be able to borrow at low rates. The security given might be special bonds of the association, backed by the individual liability of the members; even mortgages on the members' properties might be given. Out of the funds thus obtained, loans might be made to any of the members, whether for investment or tiding-over purposes; but, again, the individual loan would have to be carefully supervised so that the funds should be profitably used and not result in loss to the association. Moreover, a member with ready funds not immediately needed by him could make deposits

with the association and draw a reasonable rate of interest. Thus, farmers would extend credit directly to each other by means of the association.

Such in general is the idea of the cooperative credit associations in Europe, which have been great boons to their members. The particular form of association varies considerably from place to place, but at bottom the idea is the same; mutual guarantee of each other's obligations, hence the general financial markets can be reached at reasonably low rates of interest. There is no special magic involved. No capital can be drawn out of thin air. Further, loans to the individuals have to be carefully guarded, and membership to the association must be based upon personal integrity and financial prospects. Bad loans to individuals mean loss to the association.

The sole advantage of the association is: the members pool their capital as security for loans, and so get better terms than any individual of them could get however prosperous and well-known he might be.

The real problem is, whether the American farmer can be induced to cooperate in some such way as suggested. As a matter of fact, the ordinary American, whether farmer or otherwise, is an individualist even to the extent of his own detriment. However, various cooperative undertakings have been launched by farmers. Why not cooperate in furnishing security for each other? Whether we shall ever have such well worked out systems as exist in certain European countries, no one can tell. With the obvious advantages it seems as if some sort of credit cooperation ought to become generally established.

BILL'S SCHOOL AND MINE

By William S. Franklin

Professor in Physics, Lehigh University*

FORTY-three years ago a man who had important official authority over much of the business of England was speaking anxiously with Ruskin of the increasing misery in the suburbs and back streets of London and debating, with the good help of the Oxford Regius Professor of Medicine (who was second in council), what sanitary or moral remedy could be found. The debate languished, however, because of the strong conviction in the minds of all three that the misery was inevitable in so vast a city. Finally the conviction was expressed by the man of affairs, and Ruskin quickly replied "Then we must not have large cities," whereupon the minister somewhat contemptuously charged Ruskin with being impractical. Ruskin was indeed impractical in many things, but the most impractical

men are those who accept the increasing ugliness and misery of our industrial and commercial centers as inevitable. A man who would accept such a proposition and not arrive at Ruskin's conclusion and act upon it is hopelessly impractical.

Of all the changes that have accompanied modern developments of commerce and industry the most serious perhaps is the change in the activities of children, and my object in marking the contrast between Bill's school and mine is to help you to appreciate this change. Perhaps no out and out American of fifty years ago could have understood the London problem in the least; and even now at the beginning of the twentieth century we Americans are a great "Nation of Villagers," most of us living in what we boastfully call cities! And we are scarcely conscious

*The title and a portion of the material of this paper are borrowed from William Allen White.

as yet of the new spectre of ugliness and misery. We must become fully conscious of it before long, however, and when we do it will not be accepted as inevitable—and probably we shall not be obliged to destroy our cities either.

I always think of my school as my boyhood. Until I was big enough to swim the Missouri River my home was in a little Kansas town, and we boys lived in the woods and in the water all Summer and in the woods and on the ice all Winter. We trapped and hunted, we rowed and fished and built dams and cut stick horses and kept stick horse livery-stables where grape vines hung, and where the paw-paws mellowed in the Fall. We made mud slides into our swimming hole, and we were artists in mud-tattoo, painting face and body with thin black mud and scraping white stripes from head to foot. We climbed the trees and cut our names, we sucked the sap of the box elder and squashed poke berries for war paint. We picked wild grapes and gooseberries, and made pop guns to shoot green haws. In the Autumn we gathered walnuts and in the Spring we greeted the johnny-jump-ups and the sweet williams as they peered through the mold. Always, it seems to me, we were out of doors; and I did the chores. It is something to know the toughness of hickory under the saw, how easily walnut splits, how mean elm is to handle; and a certain dexterity comes to a boy who teaches a calf to drink, or who learns to slop hogs without soiling his Sunday clothes. And the hay makes acrobats. In the loft a boy learns to turn flip-flops and with a lariat rope he can make a trapeze. My rings were made by padding the iron rings from the hubs of a lumber wagon and swinging them from the rafters.

Bill, little Bethlehem Bill, has a better school than I had; the house and the things that go with it. Bill's teachers know more accurately what they are about than did my teachers in the old days out West half a century

ago. And, of course, Bill is getting things from his school that I did not get. But he is growing up with a woefully distorted idea of life. What does Bill know about the woods and the flowers? Where in Bill's make up is that which comes from browsing on berries and nuts and the rank paw-paw, and roaming the woods like the bander-log? And the crops, what does he know about them?

The silver-sides used to live in the pool under the limestone ledges by the old stone quarry where the snakes would sun themselves at noon. The wild-rose with its cinnamon scented flower and curling leaves used to bloom in May for me—for me and a little brown-eyed girl who found them in her ink-bottle when the school bell called us in from play. And on Saturdays we boys roamed over the prairies picking wild flowers, playing wild plays and dreaming wild dreams—children's dreams. Do you suppose this little Bill dreams such dreams in a fifty-foot lot with only his mother's flowers in the window pots to teach him the great mystery of life?

Bill has no barn. I doubt if he can skin a cat, and I am sure he cannot do the big drop from the trapeze. To turn a flip-flop would fill him with alarm, and yet Bill Betts out in Kansas used to turn a double flip-flop over a stack of barrels! and Bill Betts is a man to look at. He is built by the day. He has an educated body and it is, going into its fifties with health and strength that our Bill will have to work for.

Bill's school seems real enough, but his play and his work seem rather empty. Of course Bill cannot have the fringe of a million square miles of wild buffalo range for his out-of-doors. No, Bill cannot have that. Never, again. And to imagine that Bill needs anything of the kind is to forget the magic of Bill's dreams! A tree, a brook, a stretch of grass! What old-world things Bill's dreams can create there! What untold history repeat itself in Bill's most fragmentary play, vivid and compelling! There is indeed

a magic in Bill's dreams, and it takes but little to stir it into action; and if Bill is to grow to be a man this little must be considered well. Lest our people never consider it at all it is worth while, perhaps, to develop the contrast between Bill's school and that school of mine in the long-ago land of my boyhood out-of-doors.

The Land of Out-of-Doors! What irony there is in such glowing phrase to city boys like Bill! The supreme delight of my own boyhood days was to gather wild flowers in a wooded hollow close by a sunny stretch of wild meadow rising to the sky, and I would have you know that I lived as a boy in a land where a weed never grew.* I wish that Bill might have access to the places where the wild flowers grow and above all I wish that Bill might have more opportunity to see his father at work. A hundred years ago these things were really within the reach of every boy and girl, but now, alas, Bill sees no other manual labor than the digging of a ditch in a cluttered street, or stunted in growth, he has almost become a part of the machine he daily tends, and Boyville has become a paved and guttered city, high-walled, desolate, and dirty; with here and there a vacant lot hideous with refuse in early Spring and overwhelmed with an increasing pestilence of weeds as the Summer days go by! And the

*The western prairies, except in the very center of the Mississippi valley, are beautifully rolling, and they meet every stream with deeply carved bluffs. In the early days every stream was fringed with woods; and prairie and woodland, alike, knew nothing beyond the evenly balanced contest of indigenous life; and then there came a succession of epidemics as one after another of our noxious weeds gained foothold in that fertile land. I remember well several years when dog-fennel grew in every nook and corner of my home town in Kansas; then after a few years a variety of thistle grew to the exclusion of every other uncultivated thing; and then followed a curious epidemic of tumble-weed, a low spreading annual which broke off at the ground in the fall and was rolled across the open country in countless millions by the autumn winds. I remember well my first lone "beggar louse" and how pretty I thought it was! And my first dandelion, and of that I have never changed my opinion!

strangest thing about it all is that Bill accepts unquestioningly, and even with manifestations of joy, just any sort of a world, if only it is flooded with sunshine.

I remember how in my own boyhood the rare advent of an old tin can in my favorite swimming hole used to offend me, while such a thing as a cast-off shoe was simply intolerable, and I wonder that Bill's unquenchable delight in out-door life does not become an absolute rage in his indifference to the dreadful pollution of the streams and the universal pestilence of weeds and refuse in our thickly populated districts. I can not refrain from quoting an amusing poem of James Whitcomb Riley's, which expresses, more completely than anything I know, the delight of boys in outdoor life, where so many things happen and so many things lure, and you can easily catch in the swing of Riley's verse that wanton note which is ordinarily so fascinatingly boyish, but which may too easily turn to a raging indifference to everything that makes for purity in this troubled life of ours.

THREE JOLLY HUNTERS

O there were three jolly youngsters;
And a-hunting they did go,
With a setter-dog and a pointer-dog
And a yaller-dog also.
Looky there!

And they hunted and they hal-looed;
And the first thing they did find
Was a dinging-dangling hornet's-nest
A-swinging in the wind.
Looky there!

And the first one said "What is it?"
Said the next, "Let's punch and see,"
And the third one said, a mile from there,
"I wish we'd let it be!"
Looky there! (Showing the back of his neck.)

And they hunted and they hal-looed;
And the next thing they did raise
Was a bobbin bunny cotton-tail
That vanished from their gaze.
Looky there!

One said it was a hot base-ball,
Zippt thru the brambly thatch,
But the others said 'twas a note by post,
Or a telegraph-dispatch.
Looky there!

So they hunted and they hal-looed;
And the next thing they did sight,
Was a great big bull-dog chasing them,
And a farmer hollering "Skite!"
Looky there!

And the first one said "Hi-jinktum!"
And the next "Hi-jinktum-jee!"
And the last one said, "Them very words
Has just occurred to me!"
Looky there! (Showing the tattered seat of
his pants.)

This is the hunting song of the American Bander-log*, and this kind of hunting is better than the kind that needs a gun. To one who falls into the habit of it, the gun is indeed a useless tool. I remember a day I spent with a gun in a remote part of the Rocky Mountains, where, during the 25 days I have camped there on four different trips, I have seen as many as 150 of the wildest of North American animals, the Rocky Mountain sheep, being almost run over once by a group

*ROAD SONG OF THE BANDAR-LOG
(From Kipling's *Jungle Book*)

Here we go in a flung festoon,
Half way up to the jealous moon!
Don't you envy our pranceful bands?
Don't you wish your feet were hands?
Wouldn't you like if your tails were—so—
Curved in the shape of a Cupid's bow?
Now you're angry, but—never mind—
Brother thy tail hangs down behind!

Here we sit in a branchy row,
Thinking of beautiful things we know;
Dreaming of deeds we mean to do,
All complete in a minute or two—
Something noble and grand and good,
Done by merely wishing we could.
Now we're going to—never mind—
Brother thy tail hangs down behind!

All the talk we ever have heard
Uttered by bat, or beast, or bird—
Hide or scale or skin or feather—
Jabber it quickly and altogether!
Excellent! Wonderful! Once again!
Now we are talking just like men.
Let's pretend we are—never mind
Brother thy tail hangs down behind!
This is the way of the Monkey-kind.

Then join our leaping lines that scumfish
through the pines,
That rocket by where light and high the wild
grape swings.
By the rubbish in our wake, by the noble
noise we make,
Be sure, be sure, we're going to do some
splendid things.

of five. On the day in question I became so interested in killing mosquitoes—I timed myself at intervals while I lay in ambush, 80 per minute for 3 hours, making an honest estimate of 14,400—I became so interested in killing mosquitoes that the sheep came, and were out of range again before I saw them, and I was hungry, too. I fancy they were not frightened, but wished the good work to go on undisturbed.

Do any of you like candy? Did you ever consider that the only sweetmeat our forefathers had for thousands of years was wild honey? And those sour times—if I may call them such—before the days of sugar and candy, come much nearer to us than many of you realize, for I can remember my own grandfather's tales of bee hunting in Tennessee. Just imagine how exciting it must have been in the days of long ago to find a tree loaded with candy! A bee tree! If Bill were to go back with me to the wild woods of Tennessee, some thrill of that old excitement would well up from the depths of his soul at finding such a tree. You may wonder what I am driving at, so I will tell you, that one of the most exciting experiences of my boyhood was a battle with a colony of bumble bees. I was led into it by an older companion and the ardor and excitement of that battle, as I even now remember it, are wholly inexplicable to me except as I think of it as a representation through inherited instinct of a ten-thousand-years' search for wild honey.

My schooling grew out of the play of emotions and activities which constitute instinctive reactions toward natural things, hunting and fishing, digging and planting in the Spring, nutting in the Fall, and the thousands of variations which these things involve, and I believe that the play of instinct is the only solid basis of growth of a boy or girl. I believe, furthermore, that the very essence of boy humor is bound up with the amazing incongruity of his instincts. Was there ever a boy whose instincts, many

of them mere fatuity like his digestive appendix, have not led him time and again into just thin air, to say nothing of water and mud? For my part I have never known anything more supremely funny than learning what a hopeless mess of wood pulp and worms a bumblebee's nest really is, except, perhaps, seeing another boy learn the same stinging lesson.

The use of formulas, too, is unquestionably instinctive, and we all know how apt a boy is to indulge in formulas of the hocus-pocus sort, like Tom Sawyer's recipe for removing warts by the combined charm of black midnight and a black cat, dead; and a boy arrives only late in his boyhood, if ever, to some sense of the distinction between formulas of this kind and such as are vital and rational. I think that there is much instruction and a great deal of humor connected with the play of this instinctive tendency. I remember a great big boy, a hired man on my grandfather's farm, in fact, who was led into a fight with a nest of hornets with the expectation that he would bear a charmed skin if he shouted in loud repetition the words, "Jew's-harp, jew's-harp."

Talk about catching birds by putting salt on their tails! Once as I rowed around a bend on a small stream, I saw a sand-hill crane stalking along the shore; into the water I went with the suddenly conceived idea that I could catch that crane, and, swimming low, I reached the shore, about 20 feet from the bird, jumped quickly out of the water, made a sudden dash and the bird was captured! Once I saw a catfish gasping for air at the surface of water that had been muddied by the opening of a sluiceway in a dam. Swimming up behind the fish, I jammed a hand into each gill, and, helped by the fishes' tail, I pushed it ashore; and it weighed 36 pounds! A friend of mine by the name of Stebbins once followed his dog in a chase after a jack rabbit. The rabbit made a wide circle and came back to its own trail some distance ahead of the dog, made a big

sidewise jump, and sat looking at the dog as it passed by, so intently indeed that Stebbins walked up behind the rabbit and took it up with his hands.

I think you will agree with me that my out-door school was a wonderful thing. The Land of Out-of-Doors is to young people the best school and play house, and to older people an endless asylum of delight.

The grass so little has to do,
A sphere of simple green
With only butterflies to brood
And bees to entertain.

And stir all day to pretty tunes
The breezes fetch along
And hold the sunshine in its lap
And—bow to everything.

And thread the dew all night, like pearls,
And make itself so fine,
A duchess were too common
For such a noticing.

And even when it dies, to pass
In odors so divine
As lowly spices gone to sleep
Or amulets of pine.

And then to dwell in sovereign barns
And dream the days away
The grass so little has to do—
I wish I were the hay.

The most important thing, I should say, for the success of Bill's fine school is that ample opportunity be given to Bill for every variety of play including swimming and skating, and wherever possible, boating. It is ridiculous to attempt to teach Bill anything without the substantial results of play to build upon. Playgrounds are the cheapest and, in many respects, the best of schools, but they are almost entirely lacking in many of our towns which have grown to cities in a generation in this great "Nation of Villagers." The Boroughs of Bethlehem, for example (for we have a kind of virtue in not pretending to be a city) have no playground connected with a Public School, nor any other public place where boys can play ball.

WHAT DO YOU THINK?

(This and the following communication are from a small paper, printed

and published by two Bethlehem boys):

"We, the editors, have been dragged along back alleys, across open sewers, and through rank growths of weed and thistle to view the Monocacy meadows to consider the possibility of their use as a playground or park. We are not much impressed with the proposal, the place is apparently hopeless, but the park enthusiast could not be touched by argument. To our very practical objection that the cost would be excessive he made the foolish reply that there is no cost but a saving in using what has hitherto been wasted. To our expressed disgust for the open sewers and filth he replied that that was beside the question, for, as he said, we must sooner or later take care of the filth anyway. But, we said, the creek is contaminated above the town. Very well, he replied, we have the right to prohibit such contamination. But worst of all, in double meaning, was his instant agreement to our statement that we had our cemeteries which he said, were really better than any Bethlehem park could be.

COMMUNICATION

"Dear Editors: I took a walk along the Monocacy Creek on Sunday afternoon and discovered clear water several miles above town and a fine skating pond; but I suppose that you and all of your subscribers will have to go to our enterprising neighbor, Allentown, to find any well kept ice to skate on this Winter. Most people think that you boys can swim in nature's own water, skate on nature's own ice, and roam in nature's own woods, but it is absolutely certain that your elders must take some care and pains if you town boys are to do any of these things, and yet, here in the East, children are said to be brought up (implying care and pains) and hogs are said to be raised (implying only feeding). I thank the Lord that I was "raised" in the West where there are no such false distinctions.

Your subscriber S.

P. S. As I came home covered with beggar-lice and cockle-burrs I saw a ring of fire on South Mountain, an annual occurrence which has been delayed a whole week this Autumn by a flourish of posters in several languages offering One Hundred Dollars Reward!

S.

In these days of steam and electricity we boast of having conquered nature. Well, we have got to domesticate nature before much else can be accomplished in this country of ours. We have got to take care of our brooks and our rivers, of our open lands and our wooded hills. We have got to do it and Bill would be better off if we took half of the cost of his fine school to meet the expense of doing it. When I was a boy I belonged to the Bander-log, but Bill belongs to another tribe, the rats, and there is nothing I would like so much to do as to turn Pied Piper and lure the entire brood of Bethlehem boys and girls to Friedensville* and into that awful chasm of crystal water to come back no more, no, not even when an awakened civic consciousness had made a park of the beautiful Monocacy meadows and converted the creek into a chain, a regular diamond necklace of swimming holes. I beg the garbage men's (not a printer's error for man's) pardon for speaking of the beautiful Monocacy meadows. I refer to what has been and to what might easily continue to be. As for the diamond necklace, that, of course would have to be above our gas works where the small stream of pure tar now joins the main stream.

I know a small river in Kansas which is bordered by rich bottom lands from one-half to one mile in width between beautifully scalloped bluffs—where the upland prairie ends. In the early days thick covering of grass was everywhere, and the clear stream, teeming with life, wound its way along a deep channel among scat-

*The site of an abandoned zinc mine, where a few of the Bethlehem boys go to swim.

tered clusters of large walnut trees and dense groves of elm and cottonwood, rippling here and there over beds of rock. Now, however, every foot of ground, high and low, is mellowed by the plow, and the last time I saw the once beautiful valley of Wolf River it was as if the whole earth had melted with the rains of June, such devastation of mud was there! Surely it requires more than the plow to domesticate Nature; indeed, since I have lived between the coal-bearing Alleghanies and the sea, I have come to believe that it may require more than the plow and the crowded iron furnace, such pestilence of refuse and filth is here!

I suppose that I am as familiar with the requirements of modern industry as any man living, and as ready to tolerate everything that is economically wise, but every day as I walk to and fro I see our Monocacy Creek covered with a scum of tar, and in crossing the river bridge I see a half mile long heap of rotting refuse serving the Lehigh as a bank on the southern side; not all furnace refuse either by any means, but nameless stinking stuff cast off by an indifferent population and carelessly left in its very midst in one long unprecedented panorama of putrescent ugliness! And when on splendid autumn days the nearby slopes of old South Mountain lift the eyes into pure oblivion of these distressing things, I see again and again a line of fire sweeping through the scanty woods. This I have seen every autumn since first I came to Bethlehem.

It is easy to speak in amusing hyperbole of garbage heaps and of brooks befouled with tar, but to have seen one useless flourish of posters on South Mountain in fifteen years! That is beyond any possible touch of humor. It is indeed unfortunate that our river is not fit for boys to swim in, and it is not, for I have tried it, and I am not fastidious either, having lived an amphibious boyhood on the banks of the muddiest river in the world; but it is a positive disgrace that our river is not fit to look at, that it is good

for nothing whatever but to drink, much too good, one would think, for people who protect the only stretch of woodland that is accessible to their boys and girls by a mere flourish of posters!

I was born in Kansas when its inhabitants were largely Indians, and when its greatest resource was wild buffalo skins; and whatever objection you may have to this description of my present home-place between the coal-bearing Alleghanies and the Sea, please do not imagine that I have a sophisticated sentimentality towards the beauties of nature. No, I am still enough of an Indian to think chiefly of my belly when I look at a stretch of country. In the West I like the suggestion of hog-and-hominy which spreads for miles and miles beneath the sky, and here in the East I like the promise that is held in pillars of fire and smoke and I like the song of stream.

Bill's school and mine! It may seem that I have said a great deal about my school, and very little about Bill's. But what is Bill's school? Surely, Bill's fine schoolhouse and splendid teachers and Bill's good mother are not all there is to Bill's school. No, Bill's school is as big as all Bethlehem, and in its bigger aspects it is a bad school, bad because Bill has no opportunity to play as a boy should play, and bad because Bill has no opportunity to work as a boy should work.

"I'b'en a-kindo musin', as the feller says, and I'm

About o' the conclusion that they ain't no better time,

When you come to cypher on it, than the times we used to know

When we swore our first "dog-gone-it" sorto solem' like and low.

"You git my idy, do you?—LITTLE tads, you understand—

Jes' a wishin', thue and thue you, that you on'y was a MAN.

Yet here I am this minute, even forty, to a day,

And fergittin' all that's in it, wishin' jes the other way!

I wonder if our Bill will "wish the other way" when he is a man, indeed, I wonder if he will ever BE a man. If we could only count on that Bill's school would not be our problem.

FORESTS AND TAXATION

By S. N. Spring

Professor of Forestry, School of Forestry, Cornell University

ACCORDING to an old saying, death and taxes are two things which are certain in this world, but the manner of the one and the nature of the other are anything but certain.

A farmer's fields, meadows, pastures and woodland are collectively valued and assessed each year. Sometimes these different kinds of land are considered separately in arriving at the total or average valuation for purposes of taxation, but more often not. During the past decade in the United States there has been a growing feeling that the general property tax was not fair to investors in natural or planted forest. It is unfair if the full market value of land and timber is annually assessed, since the same crop is taxed over and over again. Examples have been found where as much as half the final yield was eaten up in taxes. Generally, however, this has not been the case because actual and present values, the standard of the law, have not been given to forest property in the lists. Individual assessors have assigned much lower values, or the average value for the whole farm acreage has been somewhat reduced. The uncertainty, however, remains in the mind of the investor and discourages forest planting and improvement of woodland. Like any business man he reckons expenditures and receipts in advance and finds that of all the expenditures that of taxes during the long period from seed to saw-log size cannot be definitely estimated.

Various ways have been proposed to prevent an excessive burden on forest growing. One way is to impose a tax on the timber when cut, in lieu of all other taxes; another, to tax the land annually, at a constant valuation, without considering the trees and tax the trees on a valuation of the stumpage at the time when they are to be cut. Some states have offered relief from

taxes in part or whole on planted lands for a period of 10 to 30 years.

The State of New York was one of the first to put these plans into law. Three acts were passed by the Legislature in 1912, Chapters 249, 363 and Section 89 of Chapter 444. Two applied to planted forest and one to woodlots. Full descriptions of these laws may be found in "The Cornell Reading Courses," Vol. II, No. 28 and in Bulletin 8, Conservation Commission, State of New York, Albany, N. Y. Through these laws the State offers relief or reduction in taxation, affording more certainty and constancy in valuation and assessment if the owner will do his part in planting good forests or improving his woodland.

The provisions of these laws are worth careful consideration by land owners. Every acre of non-agricultural land should be in productive forest to meet future needs and add to New York's prosperity in years to come.

Under one law, areas of open land, one to one hundred acres in extent if planted with forest trees not less than 800 to the acre and maintained as forest, are exempted from all taxation for thirty-five years. After that period the land is taxed but not the trees unless commercial cutting is done within the first five years after the thirty-five year period. Lands located within twenty miles of the corporate limits of a city of the first class, ten miles of a city of the second class, five miles of a city of the third class and one mile from an incorporated village are not entitled to this exemption. After the owner has planted the land he has only to file proof of planting with the Conservation Commission. The plantation is inspected by one of the Commission's foresters and if the planting is found properly completed, the necessary steps are taken to exempt it. The same law provides for lands



30 YEAR WOOD LOT. WHITE PINE.

underplanted with not less than 300 trees per acre that the trees shall be exempt for thirty-five years and the land assessed on fifty per cent of its assessable valuation for this period.

Under another law, non-agricultural lands, five dollars or less in value per acre, if planted with forest and so maintained, shall be taxed on a valuation of the land alone for thirty-five

years and this valuation is determined in advance. The trees are not taxed during the thirty-five years.

Under the third law a new system is provided for woodlots (either natural growth or planted) not exceeding fifty acres in extent, if the owner will agree to manage them under the instructions of the Commission through its foresters. The same requirement is made about

distance from cities and from an incorporated village. Under this system the land is taxed at a valuation not to exceed ten dollars per acre and there is a tax of five per cent of the stumpage value of the trees when cut. Application is made direct to the Commission on forms provided by them. Under this law people have the advantage of the services of trained foresters and a constant and certain method of taxation. It is optional with land owners to take advantage of these laws or not, as may seem best to them.

These three laws are in the right direction and should encourage farm forestry both through planting out of new forests and the improvement of existing woodlots.

Legislation will never in itself ensure practice of forestry, but it may aid greatly by removing stumbling blocks in the investor's way, just as laws have provided an adequate system for protection of forests from fire and the risk has been yearly decreasing.

The State, through the Conservation Commission, assists owners by furnishing little trees at cost for forest planting. Some of the principal ones are conifers, white pine, red pine, Scotch pine and Norway spruce, besides several kinds of broadleaf deciduous trees. The State nurseries contain several million trees and are examples of the best state nursery work in the United States.

COÖPERATIVE ASSOCIATIONS OF LONG ISLAND

By Charles T. Osborne

Vice-President of the Long Island Potato Exchange and President of the East Hampton Agricultural Association

LONG Island is so situated that it seems to be a region apart with New York City as a market at its doors taking all it can produce and acting as a bar between the farmers of the Island and the rest of the country.

Its farmers once thought that they controlled the potato market in the city. They believed that it was only necessary for them to grow the potatoes and ship independently or through an agent in order to receive the highest prices. A few years ago they began to see that there was a difference between the prices received and the prices quoted in the market, and after investigation they found that in many cases the agents were not giving them honest weight or the true conditions of the markets.

The Long Island Potato Exchange was organized to protect the farmers from the high price of fertilizer and to help them to get what they ought to for their potatoes. The capital stock was

\$20,000, five dollars a share. No one was allowed to hold more than one-fifth of the stock and each member of the Exchange had to hold one or more shares.

The object of the Exchange is to buy supplies as cheaply as possible and to sell the produce at the highest prices. It started out very well the first year reducing the price of fertilizer five dollars a ton and getting a more uniform price for the produce. But it has had to fight every inch of the way both with the buyers and the commission men in New York City whose business was being injured.

The farmers are more independent than most farmers and since a number of them are agents for fertilizer and buyers of potatoes, it is easy to see what a proposition the Exchange had and has still. The farmers who are members of the Exchange have been accustomed to buy their fertilizer from other companies if they could get it a little cheaper, not stopping to think

that the Exchange had forced down the price of fertilizer and that the fertilizer companies were trying to kill the Exchange, so that they could sell at the old price or higher. And in selling the potatoes if an outside buyer offered a cent or two more per bushel he could get them and in that way take business from the Exchange. That dollar in front of their eyes hid the view of the past and the future. For they knew that if the Exchange failed, fertilizer must go up and potatoes down.

The Exchange has been of great benefit to the farmers and has done well considering the opposition it has had. It has been the saving of many thousands of dollars to the farmers of Long Island and has educated them in the cooperative idea. When the farmers realize the necessity of getting together and standing by one another, the Exchange will be sure of their support and will be able to do better by them than it has done.

On Long Island there are a number of other organizations of other characters. Some are for the purpose of buying grain and other supplies like the East Hampton Farmers Agricultural Association of this place which is very successful. It has its regular officers and a buyer who gets the prices of grain, manure and other supplies from different companies buying where he can get the most favorable prices and the best grades. There is a date fixed when a car load of grain, for instance, will be ordered and each member must send in his order before or on that date. They are notified by card when the car will arrive, the buyer giving only one day to unload the grain. Last year the Association did over twenty thousand dollars worth of business and the saving was estimated at ten cents on the dollar. There are one hundred members of this Association paying fifty cents a year for dues.

THE COMING FARM FESTIVAL AT THE COLLEGE OF AGRICULTURE

By Prof. J. G. Needham

A NUMBER of students at the Agricultural College are undertaking the presentation of an original, outdoor, public entertainment to be given toward the end of the year.

It will be a pantomime presentation of scenes of Indian life selected to show the relation of these primitive people to mother earth, and thus to set forth primitive rural conditions and activities. Not burlesque, not tragedy, not pageantry of history, only the simple natural romantic life of our predecessors on this soil. The place: a village or a few wigwams upon the green between the hill and the forest and beside a spring brook; the people: the resident families and a few visitors. It is proposed to present; first, *Pictures*, sylvan pictures that should be rural and natural, and not too small to be seen at the distance of the top of the

hill, and not so complicated but that their significance will be easily grasped with only a few words on the program to help. Second, *Action*, and plenty of it, harmonious, sympathetic action. The things to be set forth during one afternoon and early evening on the green are the activities of a romantic and highly artistic people living here at peace.

The presentation will probably be made about the time of the annual school picnic, and the action may center about the strawberry festival which the Cayuga Indians were wont to celebrate at that time of year.

No models exist for such a play as this. It will, therefore, be wholly original. It should be of much educational value and should further the cause of out-door-study at Cornell.

The Cornell Countryman

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APRIL, 1913

A Coöperative Number

This number is devoted to coöperation. Articles on this subject are not rare in the field of agricultural journalism; neither is the subject so haggled that it does not merit further attention. American agriculture is coming to the coöperative era but not in a day. No class of people passes quickly from one economic stage to another and the farmer has always been conservative. He is not yet sufficiently imbued with the coöperative spirit nor have we learned all there is to know about coöperation. Before we complete such a far-reaching and important change there must come a longer period of discussion and a moulding of public opinion.

The subject is far too large to even outline in one number but we hope the number will be suggestive and interesting to Cornellians, who are and will be leaders in this great movement.

The College Commended

The work being done by our Agriculture College here has been commended by Governor Sulzer's committee of inquiry in its final report submitted to the Governor and the legislature. The report takes up the general question of agriculture education and expresses the opinion that a thorough investigation should be made of the state education department "to determine the value of several expensive features of the work generally established by special acts of the legislature and the property of such work being borne by the state and also to ascertain if it is not possible to utilize the information stored in some of the technical divisions for the benefit of other departments." "The New York State College of Agriculture at Cornell University is supported by the State government, also receiving some support from the national government, and is designed to be the real head of the system of agricultural teaching in the state. Already the state has expended large sums of money in the erection of buildings, and in the maintenance of this college, and can feel proud of the fact that under the direction of Dean Bailey it undoubtedly has at present the best College of Agriculture in the world.

The increase in number of students at the college has been enormous, and today there are about 2000 men and women enrolled as students.

"The college also does a large amount of work in the way of assisting individual farmers, and in coöperating with all the agriculture interest of the state, by means of farmers' meetings, farm trains, schools in interior counties of the state, issuing

of bulletins, and visits to different sections of the state by members of its staff, and these activities extend to and reach practically every important agriculture interest in the state.

"The cost of maintenance is, of necessity, growing larger each year, and the money must necessarily be appropriated by the legislature.

"In 1912 the total appropriations in connection with the New York College of Agriculture were actually \$788,000, but the Board of Trustees were authorized to make contracts for \$129,000 additional, in all \$917,000. We recommend this year that the sum of \$600,000 be allowed in the Appropriation and Supply Bills. This amount includes the additional cost of maintenance, but does not provide for the equipment of the buildings already erected under the authority of the Legislature. We do not deem it wise to recommend the erection of any large, new buildings, until the present group of buildings already under construction are completed."

The commendations of the Committee of Inquiry are most gratifying. They express again the fact that the people of the state *believe* in the work being done here in the College of Agriculture under the leadership of Dean Bailey.

The New Secretary Our new Secretary of Agriculture, David Franklin Houston, is one of the leading educators of the South. He has served three years as President of the Texas Agricultural College, three years as President of Texas University and for

five years as Chancellor of Washington University at St. Louis. His chief distinction in the agricultural world is that he has made a thorough study and investigation concerning the hookworm disease. This was the most prominent and important problem with which the South had to contend. As president of the Texas Agricultural College he became familiar with problems of production. In his studies he has shown a preference for history, biography and economics.

He is at present a trustee of the Missouri Botanical Board, a member of the Southern Education board, trustee of the John F. Slater Fund and of the Rockefeller Sanitary Commission and is a fellow of the Texas Historical Society. Secretary Houston is considered one of America's foremost educators, is progressive, and has a large capacity for administration.

A number of problems of vital importance confront the new Secretary. In the first place, the force of nearly thirteen thousand workers of the Department of Agriculture must be organized to work efficiently and without needless red tape. Then too, the Department should get in closer touch with the farmers of the country. The general feeling is that too much energy is spent in investigations which are of little practical value. The conservation of our natural resources, the preservation of public health, the improvement of our highways, such problems as these, of utmost interest to every citizen of the country, will come before the present administration. Secretary Houston, we recognize the greatness of your task and sincerely wish you well.



CAMPUS NOTES

Following the Alma Mater at the regular March Assembly, was an innovation in the singing of two old songs by the whole assembly, Auld Lang Syne and the Old Oaken Bucket. Dean Bailey remarked afterwards that the singing in "the folks way" is a way of affecting a fundamental sense in everyone. He expressed a wish that when the new auditorium is complete, the whole student body will come together often, simply to sing.

In his talk the Dean explained some internal questions. He also gave statistics which show that the enrollment of the regular students is 1263 including those that entered last February. There are 107 graduate students, 600 were here for the Winter Course, which altogether make an enrollment of about 2000 students and the Summer Students yet to be added.

The statistics of Farmer's Week show that 3100 people visited the college besides those that were in the University. The total number of lectures was 284; there were 10 demonstrations, 10 contests and competitions, 16 practices and 17 conventions. The words *conference* and *convention* are very significant at the present time in agriculture.

The Dean urged the responsibility of paying the Ag. tax by each student of agriculture, as every student enrolled automatically becomes a member of that Association. Many suggestions are continually being made by outsiders and students. All of these difficulties cannot be corrected by the

staff but many could be corrected by the students themselves. The value of a college training depends on the students own use of the opportunities offered here. If the habit of going after things is formed in college it will be continued after leaving the University. Commencement, which is often spoken of as the beginning of life is really the commencement of education.

Speaking about the city students in the College of Agriculture the Dean warned them not to begin agriculture at the college end. The fellow who comes here with the idea of making up certain deficiencies in early training in the city will find that he could get more from his course after having practical experience and getting the farmer's point of view. Twelve months spent on a real farm in farm work is the only way to acquire the knowledge of the conditions as they are. The College of Agriculture does not debar any person in the state from studying agriculture but it does maintain that everyone with practical farm experience will get more out of the work in the college than those who have not that experience. There is no reason why a city bred man should not prepare himself to be an efficient farmer.

* * *

Important business in the way of appropriations was done at the meeting of the Agricultural Association held on Tuesday evening, March 18. Money was appropriated to buy the baseball team 11 new suits so as to outfit this

year's team in good shape. The matter of getting a "skinned" diamond for the use of the Agriculture team was recommended to be brought before the Intercollege Athletic Association. It was also decided that bronze medals be given to point winners in the Carnival as well as to regular members of the teams representing the College of Agriculture. An appropriation to buy medals for all of the Agriculture teams of last year was made. This includes baseball, crew, track, basketball, cross country, and soccer, of these teams all will receive silver medals except the soccer team which will be presented with bronze medals.

The proposed amendment to the constitution of the Agricultural Association, as printed in the last COUNTRYMAN, was unanimously passed. The matter of the use of the students rooms was another subject of discussion. Signs will be placed indicating where the room is for the information of freshmen, and also rules posted concerning the care of the room. It is hoped that by a greater use of the students room the congestion of the Ag. library will be relieved.

* * *

In a highly exciting post-season game for the championship of the Intercollege basketball league, Agriculture lost to C. E. by a score of 24-21. Much interest was attracted by the game and when the fives lined up, the Armory was crowded with supporters of the two college teams. Throughout the whole game the teams were very evenly matched and it was only by brilliant work that the Engineers were able to pull out in the lead. The first half ended with a score of 11-8 in favor of Agriculture who swept the C. E. team off their feet at the start. In the second half, however, the Lincolmites came back with a rush and the score at the end was a tie 20-20. In the five minutes period that was given to finish the game, the C.E. men by hard work increased their score to 24 while Ag only added one point to theirs. For the Ag team Kopeloff and Steve took the lead in scoring while the rest

of the team played very consistently. The absence of Captain Steve weakened the team since he was one of the strongest players.

* * *

The superiority of the Agriculture athletes over those of the other colleges of the University was decisively shown at the Intercollege Carnival held in the Armory on Saturday afternoon, March 15. The score of the Carnival by colleges was as follows: Agriculture 39; C. E. and Veterinary 11; Arts, Chemistry and Law 10; Architecture 0; Sibley not entered. Much credit must be given to H. H. Knight, '14, and D. W. Kelsey, '14, for their good work in the Elephant race and the Wheelbarrow race in which they captured first place. Again in the sack race, Knight took the honors paralleling his feat of last year.

The events of the Carnival and the winners were:

Three legged race. Won by Law, Ag third, G. W. Crosier, sp., and L. C. Treman, '14.

Potato race. Won by Chemistry.

Wheelbarrow race. Won by the Agriculture team, H. H. Knight, '14, and D. W. Kelsey, '15.

Elephant race. Won by Agriculture team, H. H. Knight, '14, and D. W. Kelsey, '15.

Rope Climb. Won by S. S. Burdge, '14 of Ag.

Cadet Equipment race. Won by Company I, G. M. Montgomery, '16, Ag. Backward Sprint. Won by C. P. Russel, Sp. Ag.

Sack race. Won by H. H. Knight, '14 of Ag.

Rooster Fight. Won by Veterinary.

Board Track Relay race. Won by Agriculture, 2d., Law 3d, C. E.

* * *

The Cafeteria in the Home Economics building was opened for Farmers' Week. It is hoped to be possible to open it permanently after Easter.

* * *

The Department of Farm Crops is planning to plant the 50 or more varieties of potatoes exhibited during

Farmers' Week. The planting will be made in the "Economic Garden" which will contain all kinds of cereal, forage and root crops.

* * *

Last month the Department of Dairy Industry announced a prize of \$50.00 offered for a clean milking contest, by Mr. S. L. Stewart of Brookside Farm, Newburgh, N. Y. This contest was opened to the men regularly registered in Animal Husbandry, Course 3. The prize was divided pro-rata according to the number of bacteria per cubic centimeter in the milk, but the greatest number of germs allowed was 2000 per cubic centimeter. Beginning with this number and working backward, a scale of points was so arranged that the contestant receiving the lowest count scored the greatest number of points and so received the largest share of the prize. Thirteen men competed and the lowest count obtained at any one milking was ten germs per cubic centimeter obtained by Mr. R. M. Williams. The lowest average score was received by Mr. A. B. Dann. Mr. Stewart has again offered a prize of \$50.00 to be used for the same purpose next year.

* * *

The poultry department is now endeavoring to assist in the selling of eggs and poultry on a coöperative basis by receiving them from Farmers, grading and packing them, and sending them to the best markets available. Eggs and poultry are received at the new Poultry Building and sent to a special market. The returns are made upon the basis of the selling price, less the exact cost of marketing and handling. This is to get the producers and consumers closer together and let the right man get the right profit. Further information concerning this can be had from the Poultry Department.

* * *

Professor Bently has been giving several lectures before granges, and making woodlot examinations for private owners in various parts of the state.

It is interesting to note what success the Poultry Department had with its program during Farmers' Week. The following is a table showing the attendance taken at the different exercises held in the Poultry Building.

Building.	
Lectures	4107
Dedication Exercises	525
Laboratory Exercises	315
Poultry Conferences	50
Poultry Association Sessions	135
Poultry Contests	170
Total	5302

This does not mean that there were 5302 different persons for there were many that attended more than one exercise, but it goes to show that the exercises were well attended; also speaks well for the Poultry Department and the new building.

* * *

E. W. Mitchel, '09, who is successfully conducting a fruit farm at Stuyvesant, N. Y., talked before the Farm Management Seminar on March 12. It is planned to have a number of the alumni talk before the Farm Management Seminars this term relating about their work as county agents or their experiences as managers of their own farms. This will give the students a chance to get in direct touch with practical farmers.

* * *

The Home Economics girls gave a stunt in the auditorium on Wednesday evening, Feb. 26. It was well attended—proceeds to be used toward payment for piano in the Girls' Recreation Room.

* * *

Mrs. Olive Watson, Alfred, N. Y., is giving a series of lectures on Dye-stuffs and Dyeing before students in Home Economics.

* * *

Mr. C. C. Engle, of the Department of Soils, made a trip to the Garden City Golf Club in order to give an opinion on the condition of the soil there. The failure of the grass to grow on the links has given much trouble.

Professor Fippen spent a week in the extension school at East Bloomfield.

* * *

The regular Summer School of Agriculture this year will follow the usual plan. New and more courses will be given which will include more college credit courses.

* * *

A son was recently born to Professor and Mrs. Savage.

* * *

Prof. C. S. Wilson will give four illustrated lectures at the Brooklyn Institute of Arts and Sciences; on April 4, "Budding and Grafting;" April 11, "Varieties of Fruit for Commercial Planting and for the Home Orchard;" April 18, "Pruning;" April 25, "Methods of Managing Orchards."

* * *

Mr. H. B. Knapp of the Pomology Department was at Ravena, Albany Co., Feb. 3-8 and at Ticonderaga, March 3-8 doing extension work in Pomology.

* * *

Professor W. M. Wilson of the Department of Meteorology is the author of an interesting series of articles entitled "Fitting Crops to Climate" which have lately appeared in the *Tribune Farmer*.

* * *

Professor Edward Minns lately in charge of Extension Work in Farm Crops at Cornell has received the appointment of County Expert with headquarters at Binghamton, N. Y. Professor Minns will succeed Mr. John Barron who resigned from the Binghamton station to enter Farm Institute work and commercial practice.

* * *

Professor Reddick of the Department of Plant Pathology spoke before the Connecticut Pomological Society at its annual meeting on Feb. 5. The subject of his address was "New York methods for the Control of Apple Diseases."

Mr. Lloyd S. Tenny of the Department of Pomology has been made State Leader of Farm Bureau Work under the federal government. He will also be alumni secretary to further the coöperation of the college with its graduates.

* * *

Professor Recknagel took up his work in the Department of Forestry, February first. He has courses in Forestry Management, Lumbering and Wood Technology. During the spring recess Prof. Recknagel will take classes in Lumbering for a weeks' study in a logging camp in the mountains of Pennsylvania or the Adirondacks.

* * *

Professor Recknagel has written a book, "The Theory and Practice of Forestry Working Plans," published by Wileys. The book, which he has completed after years of study in Europe, is adapted for use as a text book in university courses in Forestry.

* * *

During the week of March 6-12, the Dairy Department held its annual one week course for managers of dairy plants of this state. This course is designed to give to experienced dairymen an opportunity to keep in touch with modern developments in their profession.

* * *

"Methods of Chick Feeding" is the latest bulletin published by the poultry department. It is edited by Miss Clara Nixon under the supervision of Professor James E. Rice.

* * *

The Newton Producing Co., has just installed one of their "Giant" 3000 egg incubators in the old Poultry Husbandry building. This is the second large incubator that the department now has, the other being called the "Mammoth" by the Little Falls Producing Co. This one also has the capacity for holding 3000 eggs.

FORMER STUDENTS



EDWIN JACKSON KYLE.

'01, B. S. A.; '02, M. S.—Edwin Jackson Kyle was born at Kyle, Hays County, Texas. He entered F. & M. College of Texas in the fall of 1896 and was graduated in 1899. He was a self-supporting student while at college but nevertheless very active in all his class affairs, being president of his class, president of the Y. M. C. A., ranking officer in the Cadet Corps and valedictorian of his class, in the fall of 1899. He entered Cornell and took his B.S.A. degree here in 1901 and his Masters' degree in 1902. During the summer of 1901 he was in charge of the shipments of fruits and vegetables from the orchards and gardens of Cornell to the Pan-American Exposition at Buffalo. Shortly after this he was appointed to the position of instructor in horticulture at the F. & M. College of Texas. In 1905, he was made head of the department as head professor. In the summer of 1911 he was made dean of the school of agriculture. He spent the summer of 1907 in the fruit regions of Colorado. He has done special work

on the peach, pecan and a number of vegetable crops and is an expert on top working pecans on hickory. He has written a number of valuable bulletins on this subject. He was a pioneer in the idea of teaching agriculture in the high school. At present Prof. Kyle is secretary of the Texas State Horticultural Society.

Prof. Kyle was married in 1904 to Alice Myers. They have one child.

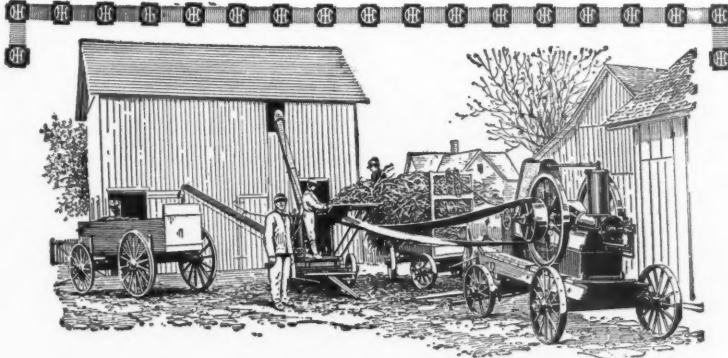
'05, B. S. A.; '07, M. S.—V. G. Dodge of Hawaii is now engaged in government service. He has charge of Farm Bureau work in New England.

'05, B. S. A.; '06, M. S.—J. M. Swan is now assistant Entomologist of the Department of Agriculture of the Dominion of Canada, dealing with forest insects particularly. After an extended trip thru British Columbia and Northern Canada in study of these insects, Mr. Swan will return to Cornell to complete his residence for the degree of Ph. D.

'06, B. S. A.—H. L. Westover who is in the employ of the Bureau of Soils of the U. S. Department of Agriculture is at present doing some cooperative work with the Forest Service and is stationed at Duquesne, Arizona. Mr. Westover is examining the lands of the Coronado National Forests with the view of determining the percentage available for agricultural purposes.

'08, B.S.—E. H. Anderson has resigned his position as Secretary and Fruit Expert of the Bedford Farmers' Coöperative Association at Mt. Kisco, N. Y., in order to take a position as Director of the Niagara County Farm Bureau with headquarters at Lockport, N. Y.

Ex '08—Marvin Jack, one of the first Indians to take a course in the College of Agriculture, died March 5 at the Tuscarora Indian Reservation at Lewiston in Niagara county. Jack was only thirty-four years of age and had a promising future before him, but tuberculosis, the foe of both the Indian and white man alike, came upon him and after resisting it for three years he succumbed.



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Editor, ORRIN M. SMITH, Ithaca, N. Y.; Business Manager, BRUCE P. JONES, Ithaca, N. Y.; Publisher, The Cornell Countryman Association, an unincorporated body of resident students in agriculture, which elects a board yearly.

Proceeds of the paper are used in its betterment and advancement. No salaries are paid to either board or association members.

ORRIN M. SMITH, Editor.

Sworn to and subscribed before me this 18th day of October, 1912.

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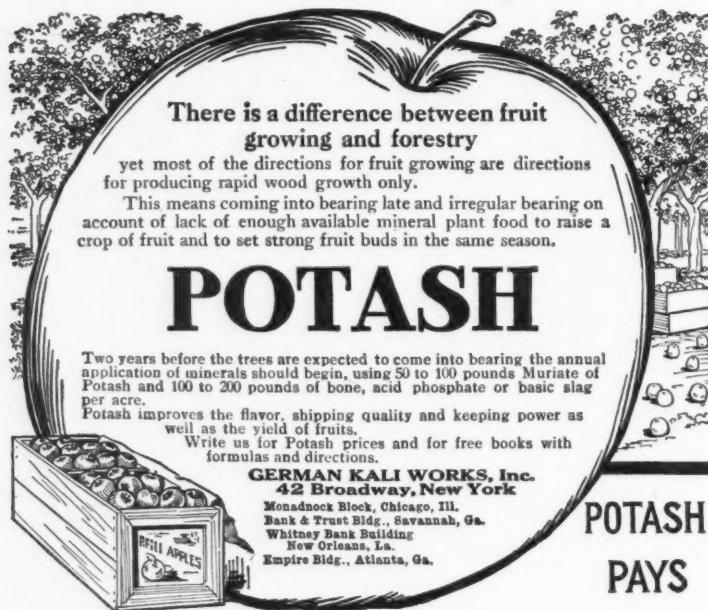
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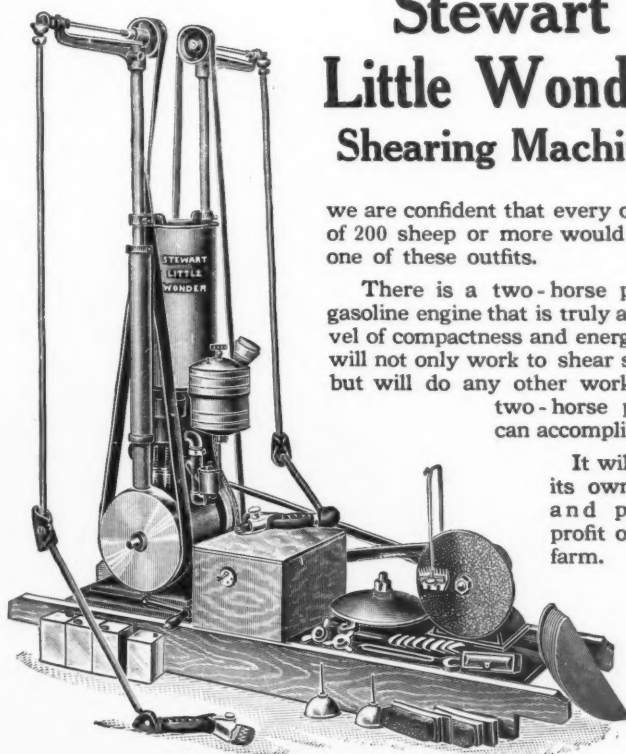
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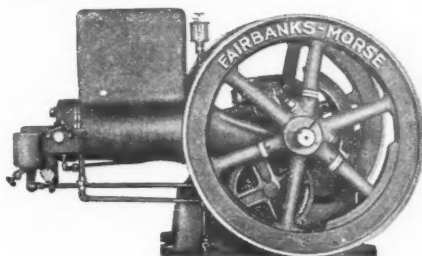
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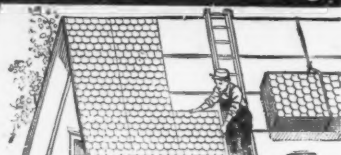
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Lock speed is a big element of success in making high scores at the trap or in the field. When you pull the trigger you want it to go with lightning speed. Flying birds and targets will not wait for a hang fire load or a slow lock. Our lock was carefully and scientifically timed at the University of Cornell. Test was made by means of a fly wheel traveling 577.1715 inches per second. By means of a special device it was found that the fly wheel traveled .935 inches while hammer was falling. Dividing .935 by 577.1715 gives the time it took the hammer to fall .00164 or expressed in fractional form $\frac{1}{612}$ of a second. When hammer struck it was traveling 233 inches per second. We figure that this greased lightning speed will increase your score at least 5 per cent. The slower the lock and the slower the load the farther you have to lead your birds. Brand new catalogue FREE—describes 18 grades guns—\$17.75 net to \$400.00 list. New edition to the Ithaca family is a little 28 bore, weight 4 $\frac{3}{4}$ to 5 $\frac{1}{4}$ pounds. Our little 5 $\frac{1}{4}$ pound 20 bore is a howling success.

Ithaca Guns
ADDRESS - ITHACA GUN COMPANY ITHACA - NEW YORK

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MOHEGAN LAKE, N. Y.

This beautiful 350-acre modern farm bordering Mohegan Lake, near Peekskill, 40 miles up the Hudson from New York City, is the home of:

PERCHERON DRAFT HORSES
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APPLES, PEACHES, CURRANTS

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"Manufacturers of bee-keeper's supplies and agricultural products for 41 years."

Our line includes bee-hives and frames, section honey-boxes, shipping cases, honey and wax extractors, comb foundation fasteners, bees, queens, complete outfits for beginners, etc.—in fact everything required by the amateur or advanced bee-keeper.

We maintain branch offices and distributing agencies in all parts of the United States and in foreign countries and invite correspondence from all interested in bee-keeping. Instructive booklets with copies of our catalog and GLEANINGS IN BEE CULTURE—a semi-monthly magazine—may be had upon request.

"The Famous Airline Bee Products."



WIPE YOUR FEET

Don't track mud, dirt, snow across carpets and floors. Grab's Automatic Foot Scraper outside the door **Saves Shoes, Floors, Carpets, Rugs and Labor**

It's the only device that cleans sides and bottom of shoes in one operation. Can be rotated and swept under. Pleasing in appearance. Nothing to get out of order. Lasts practically forever. Brushes can be replaced.

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Cleaning, Pressing, Dyeing, Repairing, Etc.

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 Next to Post
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**ITHACA
HOTEL****Ithaca's Leading Hotel**

American and European Plan

All rooms have running hot and cold water,
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RATES

American Plan, \$3.00 and up.
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STUDENT SUPPLY STORE**The Modern Method Laundry**

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HAVE YOUR FLANNEL TROUSERS CLEANED BY THE NEW PROCESS

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WE BOAST

of the finest catering outfit in Central and Western New York.

OUR TABLE SERVICE is not our sole asset, as we have an enviable reputation for excellent menus, well served, in the last 30 years.

A REQUEST FOR MENUS WILL RECEIVE PROMPT ATTENTION

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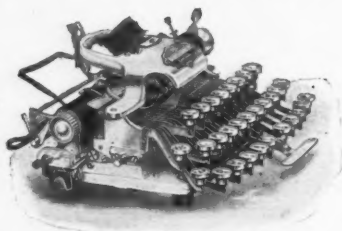
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Positively No Chemicals Used!

MENDING FREE.

*Starched Goods Equal to any done
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TRADE WITH THEM THAT TRADE WITH YOU

We cover all lines for Men's Wear

CRAVATS.....	50c up	UNDERWEAR.....	50c up
HOSIERY.....	15c "	RAIN COATS.....	\$ 5.00 "
GLOVES.....	\$1.00 "	SUITS AND OVERCOATS.....	20.00 "
SHIRTS.....	1.00 "	HATS AND CAPS.....	1.00 "

SHIRTS MADE TO ORDER, \$2.00 up

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TWO SHOPS.

MAKER OF SHIRTS THAT FIT.
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We bind anything.

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WE DO YOUR MENDING FREE

FOREST CITY LAUNDRY

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**CUT FLOWERS, DECORATIVE
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MODERN SHOE REPAIRING
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PIANOS, MANDOLINS, GUITARS, BANJOS and VIOLINS

Rented or sold on Easy Payments. **"Songs of Cornell."** All the latest
music; Strings and supplies for all instruments at lowest prices

LENT'S MUSIC STORE

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Victor Talking Machines, Records, etc.

"If you get it from us it's right"

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One Price Clothiers and Furnishers

Offer unusual advantages to students. Our Clothing is manufactured for
us to conform to the requirements of the college man by the best makers
in the country, and is sold at bottom prices. Same price to students and town
people. Suits from \$10 to \$30. We make to measure at a saving of 30 per cent.
to 50 per cent. over the exclusive tailor.

Hats, Gloves, Shirts, Sweaters, Hosiery, Underwear, Slickers

in fact everything in furnishings in keeping with our high standard of Clothing

"If not we make it right"

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Established 1887
LARKIN BROS.
 RETAILING, WHOLESALING AND
 JOBBING GROCERS
 JOHN J. LARKIN, Proprietor and Manager
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Bees Need little attention and pay big profits.
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Men who Live in the Open
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ONE PRICE TO ALL

ROTHSCHILD BROS.

"Student Supplies"
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Decorations and Necessaries

Carpets, Rugs, Bedding,
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"The Store of the City"

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FRESH, SALT AND SMOKED MEATS

Poultry and Game in Season

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WHERE QUALITY COUNTS

Halftones

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and

Embossing Plates



We are Specialists in

Color Plate Engraving and Color Printing

If you want to increase the selling power of your next catalogue, if you want to make your advertising as effective as possible, you should look into the question of using color reproductions. Our success lies, not alone in the making of proper plates, but in printing them as they should be. Our product is used by companies of international reputation. We shall be pleased to submit estimates or samples of work.

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Loading Kieffer Pears at Our Railroad Siding, Berlin, Md.

COME TO BERLIN SEE FOR YOURSELF KNOW WHAT YOU PLANT

WE WANT you to visit Harrisons' Nurseries. The trip will be an interesting one and if you need trees you can better satisfy yourself by selecting them in the nursery. Twenty-five hundred acres planted to nursery stock. Write us when you can come and how long you can stay. Distance from Baltimore, 124 miles via B. C. & A. From Philadelphia, 143 miles via P. B. & W.

**YOUR HOTEL BILL WHILE VISITING HERE WILL BE
PAID BY US.**

Harrisons' Nurseries

J. G. HARRISON & SONS, Proprietors

BERLIN, MARYLAND

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DE LAVAL

CREAM SEPARATORS

TIME TESTED

If a member of your family were dangerously ill you wouldn't think of calling in an inexperienced doctor?

Certainly not! You would call a physician who had built up a reputation, a man with experience and a successful practice.

Why not use the same care and common sense in your selection of a cream separator?



Every little while you hear of some new cream separator claiming to be "world beater" and just as good as the De Laval but a little cheaper.

These "mushroom" machines stay in the lime light only until they are "found wanting" by the users and in a short time drop out of sight.

It takes years of experience to build a "good" cream separator. More than 30 years of experiments and experience have made the De Laval pre-eminently the best machine on the market for the separation of cream from milk.

Even were other concerns not prevented by the De Laval patents from making a machine exactly like the De Laval they could not build as good a machine as the De Laval, because they all lack the De Laval manufacturing experience and organization.

If you buy a De Laval you run no risk of dissatisfaction or loss. It's time tested and time proven. Why experiment? Why take chances with an inferior machine when you KNOW that the De Laval is the BEST MACHINE FOR YOU TO BUY?

The new 72-page De Laval Dairy Hand Book, in which important dairy questions are ably discussed by the best authorities, is a book that every cow owner should have. Mailed free upon request if you mention this paper. New 1913 De Laval catalog also mailed upon request. Write to nearest office.

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